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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,618	09/04/2003	Young-Chan Kim	1293.1851	5000

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EXAMINER

SHERMAN, STEPHEN G

ART UNIT PAPER NUMBER

2629

DATE MAILED: 12/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/654,618	<b>Applicant(s)</b> KIM ET AL.	
	<b>Examiner</b> Stephen G. Sherman	<b>Art Unit</b> 2629	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 14 September 2006 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-13, 17-23, 25, 29-37 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamashita et al. (US 5,808,693).

**Regarding claim 1**, Yamashita et al. disclose a display device (Figure 1) comprising:

a signal identifying unit that receives an input signal and identifies the type of the input signal (Selector 3 shown in Figure 1 determines the input signal supplied from input terminals 1 and 2.);

a signal checking unit that checks whether the identified input signal is abnormal (Figure 1 shows microcontroller 9 that checks the input signal for abnormalities as shown in Figure 2 step S3 and explained in column 4, lines 55-65.); and

a signal changing unit that switches from the checked input signal to a next input signal to be checked so that the signal checking unit checks whether the next input signal is abnormal, if the identified input signal is determined to be abnormal (Figure 1 shows that selector 3 has input terminals 3a and 3b which correspond to the different input signals, where it is explained in column 4, lines 55-65 and column 5, lines 7-15 that if the input signal is "abnormal" then the input is switched from one terminal to the other to proceed with the checking of the input terminals.).

**Regarding claim 2**, Yamashita et al. disclose the display device of claim 1, wherein the signal identifying unit identifies whether the received input signal is one of a D-sub analog signal, a DVI analog signal, a DVI digital signal, and a VIDEO signal

(Figure 1 and column 4, lines 16-20 explain that the signals identified are video signals.).

**Regarding claim 3**, Yamashita et al. disclose the display device of claim 1, wherein the signal checking unit checks whether the identified input signal is abnormal by one of decoding the identified input signal and sensing whether an input signal cable is connected to the display device (Column 4, lines 55-65 explain that the checking of the input signal is done on the vertical and horizontal sync signals meaning that the video signals are decoded to obtain the determination.).

**Regarding claim 4**, Yamashita et al. disclose the display device of claim 1, further comprising a data setting unit that sets one of a number of times the identified input signal is checked, a time required to check the identified input signal, and a position of the identified input signal to be checked within a sequence of identified input signals to be checked (Figure 2 shows that a timer is set for checking the identified input signal),

wherein if the signal checking unit has not checked one of the number of set times whether the identified input signal is abnormal and has not checked for the period of set time whether the identified input signal is abnormal, the signal checking unit continues checking whether the identified input signal is abnormal (Column 6, lines 1-32 and Figures 2 and 3 shows that the process repeats for checking the input signal abnormality.).

**Regarding claim 5**, Yamashita et al. disclose the display device of claim 4, further comprising a signal controlling unit that checks the position of the checked input signal within the sequence of identified input signals to be checked to determine which identified input signal is to be checked after the checked input signal, wherein the signal changing unit switches from the checked input signal to the determined input signal so that the signal checking unit checks whether the determined input signal is abnormal (Figure 1 shows that there are only two input video signals, so when one is being checked, the other signal will be next, so it will always be identified as being the next signal to be checked.).

**Regarding claim 6**, this claim is rejected under the same rationale as claim 1.

**Regarding claim 7**, this claim is rejected under the same rationale as claim 2.

**Regarding claim 8**, this claim is rejected under the same rationale as claim 3.

**Regarding claim 9**, this claim is rejected under the same rationale as claim 4.

**Regarding claim 10**, this claim is rejected under the same rationale as claim 5.

**Regarding claim 11**, Yamashita et al. disclose a display device comprising:

a signal identifying unit receiving an input signal and identifying the type of received input (Selector 3 shown in Figure 1 determines the input signal supplied from input terminals 1 and 2.);

a signal checking unit checking whether the identified input signal is abnormal or normal (Figure 1 shows microcontroller 9 that checks the input signal for abnormalities as shown in Figure 2 step S3 and explained in column 4, lines 55-65.);

a signal changing unit switching from the checked input signal to check a next input signal so that the signal checking unit checks whether the next input signal is abnormal;

wherein if the checked input signal is normal, the signal continues being displayed by the display device and if the checked input signal is abnormal, the signal stops being displayed by the display device (Figure 1 shows that selector 3 has input terminals 3a and 3b which correspond to the different input signals, where it is explained in column 4, lines 55-65 and column 5, lines 7-15 that if the input signal is "abnormal" then the input is switched from one terminal to the other to proceed with the checking of the input terminals, but the signal is displayed if the signal is normal as shown in Figure 2, step S4.).

**Regarding claim 12**, Yamashita et al. disclose the display device of claim 11, wherein the identified input signal and the next input signal are abnormal if cables carrying the signals are not connected to the display device (Since as explained above the horizontal and vertical sync signals are checked for the abnormalities, the absence

of these signals would result in the signal be "abnormal." If video cables are not connected then the horizontal and vertical sync signals will not be present and the signal will be identified as "abnormal.").

**Regarding claim 13**, Yamashita et al. disclose the display device of claim 11, wherein the identified input signal and the next input signal are abnormal if H-sync and V-sync patterns associated with the signals are abnormal (Column 4, lines 55-65 and column 5, lines 7-15.).

**Regarding claim 17**, this claim is rejected under the same rationale as claim 2.

**Regarding claim 18**, this claim is rejected under the same rationale as claim 3.

**Regarding claim 19**, Yamashita et al. disclose the display device of claim 11, wherein the signal checking unit checks whether the identified input signal is abnormal by sensing whether an input signal cable is connected (Since as explained above the horizontal and vertical sync signals are checked for the abnormalities, the absence of these signals would result in the signal be "abnormal." If video cables are not connected then the horizontal and vertical sync signals will not be present and the signal will be identified as "abnormal.").

**Regarding claim 20**, Yamashita et al. disclose the display device of claim 11, further comprising a data setting unit that sets the number of times the identified input signal is checked, wherein if the signal checking unit has not checked the number of set times, the signal checking unit continues the checking (As shown in Figure 2 the number of times the input signal is checked is 1, so when it hasn't been checked it is checked and after it is checked once it moves on to the next input signal.).

**Regarding claim 21**, this claim is rejected under the same rationale as claim 4.

**Regarding claim 22**, this claim is rejected under the same rationale as claim 5.

**Regarding claim 23**, this claim is rejected under the same rationale as claim 5.

**Regarding claim 25**, this claim is rejected under the same rationale as claim 11.

**Regarding claim 29**, this claim is rejected under the same rationale as claim 17.

**Regarding claim 30**, this claim is rejected under the same rationale as claim 12.

**Regarding claim 31**, this claim is rejected under the same rationale as claim 13.

**Regarding claim 32**, this claim is rejected under the same rationale as claim 18.

***Regarding claim 33***, this claim is rejected under the same rationale as claim 19.

***Regarding claim 34***, this claim is rejected under the same rationale as claim 20.

***Regarding claim 35***, this claim is rejected under the same rationale as claim 21.

***Regarding claim 36***, this claim is rejected under the same rationale as claim 22.

***Regarding claim 37***, this claim is rejected under the same rationale as claim 23.

***Regarding claim 39***, this claim is rejected under the same rationale as claim 25.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 14-16, 24, 26-28 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al. (US 5,808,693).

**Regarding claim 14**, Yamashita et al. disclose the display device of claim 11.

Yamashita et al. fail to explicitly teach wherein the signal identifying unit identifies whether the received input signal is a D-sub analog signal, however, D-sub analog signals are well known in the art, therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made that one of the signals identified by Yamashita et al. could be a D-sub analog signal.

**Regarding claim 15**, Yamashita et al. disclose the display device of claim 11.

Yamashita et al. fail to explicitly teach wherein the signal identifying unit identifies whether the received input signal is a DVI analog signal, however, DVI analog signals are well known in the art, therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made that one of the signals identified by Yamashita et al. could be a DVI analog signal.

**Regarding claim 16**, Yamashita et al. disclose the display device of claim 11.

Yamashita et al. fail to explicitly teach wherein the signal identifying unit identifies whether the received input signal is a DVI digital signal, however, DVI digital signals are well known in the art, therefore it would have been obvious to “one of ordinary skill” in the art at the time the invention was made that one of the signals identified by Yamashita et al. could be a DVI digital signal.

**Regarding claim 24**, Yamashita et al. disclose the display device of claim 11.

Yamashita et al. fail to explicitly teach of the display device further comprising a menu from which a user determines the identified input signal is to be checked and a checking order, however, having a menu for a user to select a video input is well known in the art, therefore it would have been obvious to “one of ordinary skill” in the art at the time the invention was made for the display device to have a user selectable menu.

**Regarding claim 26**, this claim is rejected under the same rationale as claim 14.

**Regarding claim 27**, this claim is rejected under the same rationale as claim 15.

**Regarding claim 28**, this claim is rejected under the same rationale as claim 16.

**Regarding claim 38**, this claim is rejected under the same rationale as claim 24.

**Conclusion**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen G. Sherman whose telephone number is (571) 272-2941. The examiner can normally be reached on M-F, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SS

30 November 2006

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